# 10-Day Rainfall & Agromet Bulletin

## Department of Meteorological Services

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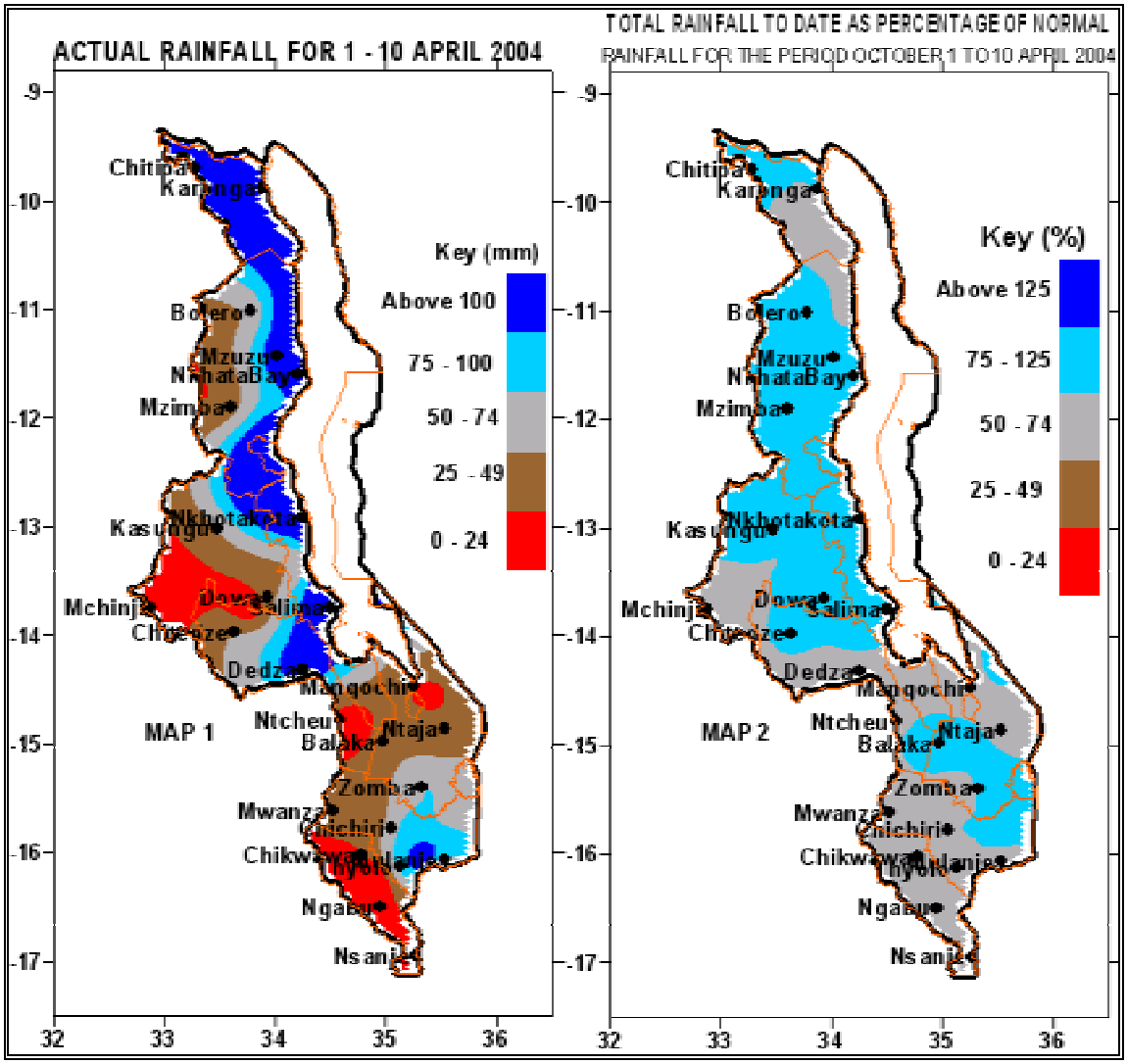
## HIGHLIGHTS

- **Lakeshore receives high rainfall as wet weather returns…**
- **Wet weather to persist in some parts of Malawi…**
- **Cumulative rainfall performance improves …**
- **Harvesting of early planted maize is in progress…**




All inquiries should be addressed to: The Director of Meteorological Services, P.O. Box 2, Chileka, MALAWI
Tel: (265) 1 692 312/333/320 Fax: (265) 1 692 329 E-mail: metdept@metmalawi.com Homepage: www.metmalawi.com

# 1. WEATHER SUMMARY

## 1.1 RAINFALL

Easterly waves brought rains to most areas of Malawi during the first 10-days of April 2004. Most areas which were mostly dry in March experienced moderate to heavy rainfall. Heavy rainfall with amounts in excess of 170mm was received along the lakeshore where Dwangwa in Nkhotakota registered 277mm, Nkhata Bay 201mm, Salima and Karonga 196mm, Baka Research in Karonga 173mm and Nkhotakota 171mm. Otherwise, most areas received moderate rainfall.

Heavy rainfall received during the 10-day period greatly improved cumulative rainfall performance over most areas of Malawi particularly along the lakeshore districts. By 10th April 2004 most areas in the north and centre had received between 75 and 125% of the expected rainfall amounts. Over the south rainfall deficits persisted except over some parts of Zomba, Balaka and Machinga districts. Most areas in the south had received between 50 and 74% of the expected rainfall amounts.

## 1.2 MEAN AIR TEMPERATURE

Warm to hot temperatures were maintained over most parts of Malawi. Mean daily maximum temperatures ranged from 25°C at Mzuzu and Bvumbwe, to 33°C at Ngabu. Mean daily minimum temperatures ranged from 14°C to 23°C, with lowest values recorded over central plain. The highest absolute temperature was still registered at Ngabu (35°C) while the lowest temperature (13°C) was reported at Kasungu on 7th April 2004.

## 1.3 AVERAGE DAILY WIND SPEEDS

Average daily wind speeds across the country remained in the light and variable category. The highest average daily wind speed was 2.6m/s and this was registered at Nkhotakota along the lakeshore.

## 1.4 MEAN RELATIVE HUMIDITY

Most areas reported an increase in mean daily relative humidity values during the period 1 to 10 April 2004. This was due to moist air that prevailed over most parts of Malawi. Mean daily relative humidity values ranged from 64% at Mimosa to 86% over Mzuzu and Thyolo.

## 1.5 MEAN SUNSHINE HOURS

Lower mean daily sunshine hours were experienced in most areas due to cloudy and wet weather that prevailed over the country. Most areas registered mean daily sunshine hours of less than 7 hours during the period.

# 2. AGROMETEOROLOGICAL ASSESSMENTS

In the first 10-days of April the country received some significant rainfall although the impact on crop performance will be very little. Late planted maize that suffered from severe water stress during flowering stage during the month of March will not recover from the damage caused. Moderate to heavy rains received along the lakeshore districts supported planting, growth and development of cassava and sweet potatoes.

Early indications indicate that overall maize crop production this season at national level will be lower than 1.98 million metric tonnes. Production in southern Malawi has suffered from poor, erratic and late onset of seasonal rains and prolonged dry spell in March when the late planted crop reached crucial flowering stage. Reports indicate that harvesting of early planted maize was in progress in some parts of the country and some households are consuming own maize. The return of wet conditions will somehow disturb harvesting and drying of matured maize crop and even increase field losses due to rotting.

## 2. FORECAST FOR 11 –20 APRIL 2004

Current atmospheric patterns indicate intensification of high pressure area over the Indian Ocean. This will confine the main rain bearing systems to East Africa. Easterly waves are expected to maintain rains in some parts of Malawi during the period 11 to 20 April 2004

**TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 1 OF APRIL 2004: PERIOD 1 - 10**

| STATION NAME<br>SOUTHERN REGION | DEKADAL TOTAL RAINFALL mm | DEKADAL NORMAL mm | TOTAL TO DATE mm | NORMAL TO DATE mm | TOTAL TODATE AS % NORMAL | RAINY DAYS ≥ 0.3 mm |
|---|---|---|---|---|---|---|
| Blantyre Town Hall | 56.0 | 27.0 | 591.5 | 1036.9 | 57 | 2 |
| Bvumbwe Met. | 75.7 | 30.0 | 664.9 | 1017.4 | 65 | 5 |
| Chancellor College | 75.3 | 38.0 | 1086.1 | 1353.8 | 80 | 5 |
| Chichiri Met. | 72.9 | 29.0 | 781.6 | 1032.6 | 76 | 3 |
| Chileka Airport | 38.9 | 23.6 | 560.4 | 857.7 | 65 | 6 |
| Liwonde Township | 45.8 | 17.2 | N/A | 809.2 | N/A | 5 |
| Lujeri Tea Estate | 97.2 | 106.5 | 1114.3 | 1850.5 | 60 | 6 |
| Mangochi Met. | 25.7 | 18.4 | 470.6 | 808.1 | 58 | 5 |
| Mimosa Met. | 58.7 | 61.7 | 715.4 | 1350.6 | 53 | 6 |
| Monkey Bay Met. | 76.8 | 5.8 | 570.7 | 904.2 | 63 | 4 |
| Mulanje Boma | 121.3 | 75.9 | 962.0 | 1514.4 | 64 | 6 |
| Mwanza Boma | 42.0 | 25.9 | 544.6 | 955.4 | 57 | 5 |
| Namiasi Agric | 31.9 | 2.9 | N/A | 786.2 | N/A | 3 |
| Naminjiwa Agric | 65.4 | 20.9 | 905.3 | 914.4 | 99 | 3 |
| Namwera Agric | 25.4 | 34.4 | 881.7 | 1032.1 | 85 | 2 |
| Nchalo Sucoma | 3.1 | 19.8 | 362.4 | 650.2 | 56 | 2 |
| Ngabu Met. | 1.5 | 16.2 | 470.0 | 737.9 | 64 | 1 |
| Ntaja Met. | 28.1 | 26.5 | 621.4 | 865.6 | 72 | 4 |
| Satemwa Tea Est. No.1 | 59.4 | 53.0 | 752.7 | 1218.3 | 62 | 6 |
| Toleza Farm | 37.4 | 23.5 | 747.0 | 818.5 | 91 | 3 |
| Thyolo Met | 88.6 | 43.2 | 646.3 | 1089.2 | 59 | 5 |
| **CENTRAL REGION** | | | | | | |
| Chitedze Met. | 51.1 | 23.8 | 736.2 | 882.1 | 83 | 2 |
| Dedza Met | 127.0 | 21.6 | 639.1 | 907.9 | 70 | 7 |
| Dwangwa Sugar Corp. | 277.4 | 108.0 | 1212.4 | 1283.8 | 94 | 7 |
| L.I.A. Met. | 11.3 | 16.7 | 636.1 | 820.2 | 78 | 4 |
| Kasungu Met | 48.5 | 9.3 | 808.4 | 839.9 | 96 | 3 |
| Mchinji Boma | 31.5 | 32.6 | 688.0 | 1004.5 | 68 | 2 |
| Mwimba Research | 14.4 | 13.4 | 856.4 | 898.4 | 95 | 2 |
| Nkhotakota Met | 170.6 | 78.6 | 1209.2 | 1368.2 | 88 | 9 |
| Ntchisi Boma | 47.1 | 24.1 | 1022.7 | 845.2 | 121 | 4 |
| Salima Met | 195.6 | 42.7 | 1098.8 | 1208.6 | 91 | 9 |
| **NORTHERN REGION** | | | | | | |
| Baka Res. Stn. | 173.1 | 140.5 | 659.1 | 1200.4 | 55 | 6 |
| Bolero Met | 52.3 | 18.6 | 655.1 | 711.0 | 92 | 5 |
| Karonga Met. | 195.5 | 76.1 | 912.7 | 946.5 | 96 | 9 |
| Mzimba Met | 32.6 | 19.6 | 882.9 | 860.1 | 103 | 7 |
| Mzuzu Met. | 130.5 | 87.0 | 898.9 | 1057.9 | 85 | 10 |
| Nkhata Bay Met. | 200.7 | 85.8 | 1062.3 | 1399.7 | 76 | 7 |

## TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 1 OF APRIL 2004

| STATION | MAX TEMP (°C) | MIN TEMP (°C) | ABS MAX (°C) | ABS MIN (°C) | WIND SPEED m/s | RH % | SUN SHINE HOURS | Eo mm per day | Et mm per day | RAD-TION cal $cm^{-2}$ p/day |
|---|---|---|---|---|---|---|---|---|---|---|
| BVUMBWE | 24.5 | 16.3 | 27.3 | 14.5 | 1.7 | 76 | 4.9 | 5.1 | 4.0 | 7.4 |
| BOLERO | 27.3 | 18.1 | 28.6 | 15.6 | 0.5 | 79 | 6.5 | 5.5 | 4.3 | 8.2 |
| CHICHIRI | 25.9 | 17.7 | 27.8 | 15.4 | 0.8 | 79 | 4.0 | 4.7 | 3.7 | 6.8 |
| CHILEKA | 26.9 | 20.0 | 30.1 | 17.6 | 2.3 | 84 | 5.7 | 5.6 | 4.4 | 7.9 |
| NTAJA | 28.3 | 21.0 | 30.0 | 19.1 | 1.8 | 78 | 7.5 | 6.7 | 5.3 | 9.4 |
| CHITEDZE | 26.9 | 17.6 | 28.1 | 15.5 | 0.6 | 74 | 6.0 | 5.5 | 4.3 | 8.0 |
| KASUNGU | 27.7 | 14.3 | 28.4 | 13.4 | 1.3 | 79 | 6.9 | 5.6 | 4.3 | 8.6 |
| KARONGA | 28.9 | 21.8 | 30.0 | 22.5 | 1.3 | 76 | 6.0 | 6.3 | 5.0 | 8.5 |
| L I A | 26.4 | 17.3 | 27.3 | 14.8 | 1.5 | 84 | 6.0 | 5.4 | 4.2 | 8.0 |
| MANGOCHI | 31.0 | 22.1 | 32.5 | 20.0 | 1.1 | 73 | 7.3 | 6.7 | 5.3 | 8.9 |
| MIMOSA | 27.6 | 19.4 | 29.6 | 20.0 | 1.1 | 64 | 5.1 | 5.6 | 4.5 | 7.6 |
| MONKEY BAY | 30.1 | 22.3 | 30.9 | 21.3 | 1.9 | 70 | 8.0 | 7.1 | 5.7 | 9.3 |
| MZIMBA | 26.4 | 16.9 | 28.0 | 15.5 | 0.7 | 80 | 5.0 | 4.9 | 3.9 | 7.3 |
| MZUZU | 25.0 | 17.5 | 27.2 | 16.5 | 1.3 | 86 | 4.8 | 4.8 | 3.7 | 7.2 |
| NGABU | 32.5 | 22.6 | 34.6 | 19.5 | 1.4 | 77 | 8.1 | 7.3 | 5.8 | 9.5 |
| NKHATA BAY | 29.5 | 20.5 | 30.5 | 20.4 | 1.2 | 80 | 7.0 | 6.1 | 4.8 | 8.6 |
| NKHOTAKOTA | 28.5 | 21.4 | 29.8 | 20.5 | 2.6 | 84 | 8.0 | 6.8 | 5.4 | 9.3 |
| SALIMA | 29.3 | 21.4 | 30.2 | 20.1 | 1.8 | 78 | 7.2 | 6.4 | 5.1 | 8.8 |
| THYOLO | 26.5 | 18.9 | 28.6 | 15.4 | 0.9 | 86 | 6.7 | 5.5 | 4.3 | 7.9 |

**Glossary of some terms on this table**

- RH = Relative Humidity
- Mean Temperature of the day =(Max of the day + Min of the same day )/2
- ABS Max (Min) = Absolute Maximum (minimum) is the highest (lowest) of maximum (minimum) temperatures observed for a given number of days (calendar month) of a specified period of months (years).